

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Formosa Plastics Corporation, Texas

AUTHORIZING THE OPERATION OF
Formosa Point Comfort Plant
Specialty PVC Plant
Plastics Material and Resin Manufacturing

LOCATED AT
Calhoun County, Texas
Latitude 28° 41' 20" Longitude 96° 32' 50"
Regulated Entity Number: RN100218973

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O3409 Issuance Date: _____

For the Commission

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General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:

Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:
 - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
 - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.
 - C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
 - D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
 - E. Emission units subject to 40 CFR Part 63, Subparts HHHHHHH and ZZZZ as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter

113, Subchapter C, §§ 113.1555 and 113.1090 which respectively incorporate the 40 CFR Part 63 Subparts by reference.

2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
 - A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
 - B. Title 30 TAC § 101.3 (relating to Circumvention)
 - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
 - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
 - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
 - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
 - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
 - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
 - I. Title 30 TAC § 101.222 (relating to Demonstrations)
 - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
 - A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:
 - (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
 - (ii) Title 30 TAC § 111.111(a)(1)(E)
 - (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
 - (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that

does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

- (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
- (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.
- (3) Records of all observations shall be maintained.
- (4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
- (5) Compliance Certification:
 - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is

determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)
- (iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
 - (1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.
 - (2) Records of all observations shall be maintained.
 - (3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

- (4) Compliance Certification:
 - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A).
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.
- C. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.
- D. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:
 - (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)
 - (ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)
 - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)
4. For storage vessels maintaining working pressure as specified in 30 TAC Chapter 115, Subchapter B, Division 1: "Storage of Volatile Organic Compounds," the permit holder shall comply with the requirements of 30 TAC § 115.112(c)(1).
5. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:
 - A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)
 - B. Title 40 CFR § 60.8 (relating to Performance Tests)
 - C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)

- D. Title 40 CFR § 60.12 (relating to Circumvention)
 - E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)
 - F. Title 40 CFR § 60.14 (relating to Modification)
 - G. Title 40 CFR § 60.15 (relating to Reconstruction)
 - H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)
6. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 61, unless otherwise stated in the applicable subpart:
- A. Title 40 CFR § 61.05 (relating to Prohibited Activities)
 - B. Title 40 CFR § 61.07 (relating to Application for Approval of Construction or Modification)
 - C. Title 40 CFR § 61.09 (relating to Notification of Start-up)
 - D. Title 40 CFR § 61.10 (relating to Source Reporting and Request Waiver)
 - E. Title 40 CFR § 61.12 (relating to Compliance with Standards and Maintenance Requirements)
 - F. Title 40 CFR § 61.13 (relating to Emissions Tests and Waiver of Emission Tests)
 - G. Title 40 CFR § 61.14 (relating to Monitoring Requirements)
 - H. Title 40 CFR § 61.15 (relating to Modification)
 - I. Title 40 CFR § 61.19 (relating to Circumvention)
7. For facilities where total annual benzene quantity from waste is greater than or equal to 10 megagrams per year and subject to emission standards in 40 CFR Part 61, Subpart FF, the permit holder shall comply with the following requirements:
- A. Title 40 CFR § 61.342(c)(1)(i) - (iii) (relating to Standards: General)
 - B. Title 40 CFR § 61.342(c)(2) (relating to Standards: General)
 - C. Title 40 CFR § 61.342(g) (relating to Standards: General)
 - D. Title 40 CFR § 61.350(a) and (b) (relating to Standards: Delay of Repair)
 - E. Title 40 CFR § 61.355(a)(1)(iii), (a)(2), (a)(6), (b), and (c)(1) - (3) (relating to Test Methods, Procedures, and Compliance Provisions)
 - F. Title 40 CFR § 61.356(a) (relating to Recordkeeping Requirements)
 - G. Title 40 CFR § 61.356(b), and (b)(1) (relating to Recordkeeping Requirements)
 - H. Title 40 CFR § 61.356(b)(5) (relating to Recordkeeping Requirements)
 - I. Title 40 CFR § 61.357(a), (d)(1), (d)(2) (d)(6) and (d)(8) (relating to Reporting Requirements)

8. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

New Source Review Authorization Requirements

9. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
 - A. Are incorporated by reference into this permit as applicable requirements
 - B. Shall be located with this operating permit
 - C. Are not eligible for a permit shield
10. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.
11. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

12. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.
13. Use of Discrete Emission Credits to comply with the applicable requirements:
 - A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117
 - (iii) If applicable, offsets for Title 30 TAC Chapter 116

- (iv) Temporarily exceed state NSR permit allowables
- B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:
 - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)
 - (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4
 - (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)
 - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122
 - (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Risk Management Plan

- 14. For processes subject to 40 CFR Part 68 and specified in 40 CFR § 68.10, the permit holder shall comply with the requirements of the Accidental Release Prevention Provisions in 40 CFR Part 68. The permit holder shall submit to the appropriate agency either a compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR § 68.10(a), or as part of the compliance certification submitted under this permit, a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a risk management plan.

Protection of Stratospheric Ozone

- 15. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone:
 - A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants or non-exempt substitutes shall be conducted in accordance with 40 CFR Part 82, Subpart F. Permit holders shall ensure that repairs on or refrigerant removal from refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.
 - B. The permit holder shall comply with the following 40 CFR Part 82, Subpart E requirements for labeling products using ozone-depleting substances:
 - (i) Title 40 CFR § 82.100 (relating to Purpose)
 - (ii) Title 40 CFR § 82.102(a)(1) - (3), (b), (c) (relating to Applicability);
 - (iii) Title 40 CFR § 82.104 (relating to Definitions)
 - (iv) Title 40 CFR § 82.106 - 112 (relating to Warning Statements and Labels)

- (v) Title 40 CFR § 82.114 (relating to Labeling Containers of Controlled [ozone - depleting] Substances)
- (vi) Title 40 CFR § 82.116 (relating to Incorporation of Products Manufactured with Controlled [ozone-depleting] Substances)
- (vii) Title 40 CFR § 82.120 (relating to Petitions)
- (viii) Title 40 CFR § 82.122 (relating Certification, Recordkeeping, and Notice requirements)
- (ix) Title 40 CFR § 82.124 (relating to Prohibitions)

Permit Location

16. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Permit Shield (30 TAC § 122.148)

17. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary	12
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Applicable Requirements Summary	13
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Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
EG-01	SRIC ENGINES	N/A	63ZZZZ-1	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
EG-02	SRIC ENGINES	N/A	63ZZZZ-1	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
FUG-01	MISCELLANEOUS UNITS	N/A	HHHHHHH-1	40 CFR Part 63, Subpart HHHHHHH	No changing attributes.
I-01/I-02	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
SPEC PVC	MISCELLANEOUS UNITS	N/A	HHHHHHH-1	40 CFR Part 63, Subpart HHHHHHH	No changing attributes.
TF-01	MISCELLANEOUS UNITS	N/A	HHHHHHH-1	40 CFR Part 63, Subpart HHHHHHH	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
EG-01	EU	63ZZZZ-1	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(b)(1) § 63.6595(c) § 63.6640(f)(1) § 63.6640(f)(2) § 63.6640(f)(2)(i) § 63.6640(f)(3)	An affected source which meets either of the criteria in paragraphs §63.6590(b)(1)(i)-(ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).	None	None	§ 63.6645(f)
EG-02	EU	63ZZZZ-1	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(b)(1) § 63.6595(c) § 63.6640(f)(1) § 63.6640(f)(2) § 63.6640(f)(2)(i) § 63.6640(f)(3)	An affected source which meets either of the criteria in paragraphs §63.6590(b)(1)(i)-(ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).	None	None	§ 63.6645(f)
FUG-01	EU	HHHHHH H-1	112(B) HAPS	40 CFR Part 63, Subpart HHHHHHH	§ 63.11915(a) § 63.1022(a) § 63.1022(b) § 63.1022(c) § 63.1022(d) § 63.1023(a)(1)(i) § 63.1023(a)(1)(ii) § 63.1023(a)(1)(iii) § 63.1023(a)(1)(iv) § 63.1023(a)(2) § 63.1023(b)(1) § 63.1023(b)(2)(i) § 63.1023(b)(3) § 63.1023(b)(4) § 63.1023(b)(5) § 63.1023(b)(6)	For equipment in HAP service (as defined in §63.12005), you must comply with the requirements in paragraphs (a) through (c) of this section. (a) Requirement for certain equipment in subpart UU of this part. You must comply with §§63.1020 through 63.1025, 63.1027, 63.1029 through 63.1032, and 63.1034 through 63.1039 of subpart UU of this part.	None	§ 63.1038(a) § 63.1038(b)(2) § 63.1038(b)(3) § 63.1038(b)(6) § 63.1038(b)(7) § 63.1038(c)(1)(i) § 63.1038(c)(2) § 63.1038(c)(3) § 63.1038(c)(4) § 63.1038(c)(5) § 63.11985(a)(2) § 63.11985(a)(9)(ii) § 63.11985(b)(2) § 63.11985(c)(7)	§ 63.1039(a)(1)(i) § 63.1039(a)(1)(ii) § 63.1039(a)(1)(iii) § 63.1039(b)(1)(i) § 63.1039(b)(1)(ii) § 63.1039(b)(1)(iii) § 63.1039(b)(1)(iv) § 63.1039(b)(2) § 63.1039(b)(4) § 63.1039(b)(8) § 63.11990(a) § 63.11990(c)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					\$ 63.1023(c) \$ 63.1023(d) \$ 63.1023(e) \$ 63.1024(a) \$ 63.1024(c) \$ 63.1024(d) \$ 63.1024(e) \$ 63.1024(f) \$ 63.1025(b)(1) \$ 63.1025(b)(2) \$ 63.1025(b)(3)(ii) \$ 63.1025(b)(3)(vi) \$ 63.1025(c) \$ 63.1025(d) \$ 63.1025(e)(1) \$ 63.1025(e)(2) \$ 63.1027(a) \$ 63.1027(b)(1) \$ 63.1027(b)(2) \$ 63.1027(b)(3)(i) \$ 63.1027(b)(3)(iv) \$ 63.1027(b)(3)(v) \$ 63.1027(d) \$ 63.1027(e)(1) \$ 63.1027(e)(2) \$ 63.1029(a) \$ 63.1029(b) \$ 63.1029(c) \$ 63.1030(a) \$ 63.1030(b) \$ 63.1030(c) \$ 63.1032(a) \$ 63.1032(b) \$ 63.1032(c)(1) \$ 63.1032(c)(5) \$ 63.1032(d) \$ 63.11915(b) \$ 63.11915(c)(1) \$ 63.11915(c)(2)				

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
I-01/I-02	EP	R5121-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(c)(1) § 115.121(c)(1) § 115.122(c)(1)(A)	For all persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, any vent gas streams affected by §115.121(c)(1) must be controlled properly using one of the control requirements specified in §115.122(c)(1)(A)-(C).	[G]§ 115.125 § 115.126(2)	§ 115.126 § 115.126(2)	None
SPEC PVC	PRO	HHHHHH H-1	112(B) HAPS	40 CFR Part 63, Subpart HHHHHHH	§ 63.11880(a) § 63.11880(b) § 63.11880(c) § 63.11885 § 63.11890 § 63.11895 § 63.11896 § 63.11900(a) § 63.11900(b) § 63.11900(e) § 63.11905 § 63.11910(a) § 63.11910(b) § 63.11910(c) § 63.11925(a) § 63.11925(b) § 63.11930(a) § 63.11930(b) § 63.11930(c)(2) § 63.11930(d)(1) § 63.11930(d)(3) § 63.11930(e) § 63.11930(f) § 63.11930(g)(1)(ii) § 63.11930(g)(2) § 63.11930(g)(3) § 63.11930(g)(4) § 63.11930(g)(5) § 63.11930(h)	You must comply with each emission limit and standard specified in Table 1 to this subpart that applies to your existing affected source, and you must comply with each emission limit and standard specified in Table 2 to this subpart that applies to your new affected source.	§ 63.11900(a) § 63.11900(b) § 63.11900(e) § 63.11905 § 63.11910(a) § 63.11910(c) § 63.11920(a)(1)(i) § 63.11920(a)(3) § 63.11920(a)(4)(i) § 63.11920(c) § 63.11920(d) § 63.11920(e) § 63.11920(f) § 63.11920(g) § 63.11920(h) § 63.11925(c) § 63.11925(d) § 63.11925(e)(1) § 63.11925(e)(2) § 63.11925(e)(4) § 63.11925(e)(5) § 63.11925(f) § 63.11925(g)(2)(iv) § 63.11925(h) § 63.11935(a) § 63.11935(c) § 63.11935(d) § 63.11935(e) § 63.11940(b)(1)	§ 63.11990 § 63.11995	§ 63.11890(c)(2) § 63.11985(a) § 63.11985(b) § 63.11985(c)(1) § 63.11985(c)(7) § 63.11985(c)(9)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					\$ 63.11955(a) \$ 63.11955(b) \$ 63.11955(c) \$ 63.11955(e) \$ 63.12000 \$ 63.12005		\$ 63.11940(c)(2)(i) \$ 63.11940(c)(3)(i) \$ 63.11945(a) \$ 63.11945(b) \$ 63.11945(c) \$ 63.11956 \$ 63.11960		
TF-01	EU	HHHHHH H-1	112(B) HAPS	40 CFR Part 63, Subpart HHHHHHH	\$ 63.11915(a) \$ 63.1020 \$ 63.1022(a) \$ 63.1022(a)(1)(i) \$ 63.1022(a)(1)(ii) \$ 63.1022(a)(1)(iii) \$ 63.1022(a)(1)(iv) \$ 63.1022(b) \$ 63.1022(c) \$ 63.1022(d) \$ 63.1023(a)(2) \$ 63.1023(b)(1) \$ 63.1023(b)(2)(i) \$ 63.1023(b)(3) \$ 63.1023(b)(4) \$ 63.1023(b)(5) \$ 63.1023(b)(6) \$ 63.1023(c) \$ 63.1023(d) \$ 63.1023(e) \$ 63.1024(a) \$ 63.1024(c) \$ 63.1024(d) \$ 63.1024(e) \$ 63.1024(f) \$ 63.1025(a)(1) \$ 63.1025(b)(1) \$ 63.1025(b)(2) \$ 63.1025(b)(3)(ii) \$ 63.1025(b)(3)(vi) \$ 63.1025(c) \$ 63.1025(d)	For equipment in HAP service (as defined in §63.12005), you must comply with the requirements in paragraphs (a) through (c) of this section. (a) Requirement for certain equipment in subpart UU of this part. You must comply with §§63.1020 through 63.1025, 63.1027, 63.1029 through 63.1032, and 63.1034 through 63.1039 of subpart UU of this part.	None	\$ 63.1038(a) \$ 63.1038(b)(2) \$ 63.1038(b)(3) \$ 63.1038(b)(6) \$ 63.1038(b)(7) \$ 63.1038(c)(1)(i) \$ 63.1038(c)(2) \$ 63.1038(c)(3) \$ 63.1038(c)(4) \$ 63.1038(c)(5) \$ 63.11985(a)(2) \$ 63.11985(a)(9)(ii) \$ 63.11985(b)(2) \$ 63.11985(c)(7)	\$ 63.1039(a)(1)(i) \$ 63.1039(a)(1)(ii) \$ 63.1039(a)(1)(iii) \$ 63.1039(b)(1)(i) \$ 63.1039(b)(1)(ii) \$ 63.1039(b)(1)(iii) \$ 63.1039(b)(1)(iv) \$ 63.1039(b)(2) \$ 63.1039(b)(4) \$ 63.1039(b)(8) \$ 63.11990(a) \$ 63.11990(c)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					\$ 63.1025(e)(1) \$ 63.1025(e)(2) \$ 63.1027(a) \$ 63.1027(b)(1) \$ 63.1027(b)(2) \$ 63.1027(b)(3)(i) \$ 63.1027(b)(3)(iv) \$ 63.1027(b)(3)(v) \$ 63.1027(d) \$ 63.1027(e)(1) \$ 63.1027(e)(2) \$ 63.1030(a) \$ 63.1030(b) \$ 63.1030(c) \$ 63.1030(d) \$ 63.1030(e) \$ 63.1032(a) \$ 63.1032(b) \$ 63.1032(c)(1) \$ 63.1032(c)(5) \$ 63.1032(d) \$ 63.11915(b) \$ 63.11915(c)(1) \$ 63.11915(c)(2)				

Permit Shield

Permit Shield 19

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
CT-01	N/A	40 CFR Part 63, Subpart Q	Cooling tower not operated with chromium based water treatment chemicals.
I-01/I-02	N/A	40 CFR Part 60, Subpart Db	These incinerators are not steam generators.
I-01/I-02	N/A	40 CFR Part 60, Subpart E	These incinerators are not furnaces used in the process of burning solid waste.
SPEC PVC	N/A	40 CFR Part 63, Subpart F	Specialty PVC Plant does not manufacture as a primary product one or more of the chemicals listed in §63.100(b)(1)(i) or (b)(1)(ii) of this section.
SPEC PVC	N/A	40 CFR Part 63, Subpart G	Specialty PVC Plant does not manufacture as a primary product one or more of the chemicals listed in §63.100(b)(1)(i) or (b)(1)(ii) of this section.
SPEC PVC	N/A	40 CFR Part 63, Subpart H	Specialty PVC Plant does not manufacture as a primary product one or more of the chemicals listed in §63.100(b)(1)(i) or (b)(1)(ii) of this section.
T-D01	N/A	40 CFR Part 60, Subpart Kb	Storage capacity is less than 19,800 gallons.
T-D02	N/A	40 CFR Part 60, Subpart Kb	Storage capacity is less than 19,800 gallons.

New Source Review Authorization References

New Source Review Authorization References	21
New Source Review Authorization References by Emission Unit	22

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: PSDTX1058	Issuance Date: 01/26/2018
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 76305	Issuance Date: 01/26/2018
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.393	Version No./Date: 09/04/2000
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.477	Version No./Date: 09/04/2000

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
CT-01	COOLING TOWER NO. 1	76305, PSDTX1058
EG-01	GENERATOR 1	76305, PSDTX1058
EG-02	GENERATOR 2	76305, PSDTX1058
FUG-01	PROCESS AREA PIPING EQUIPMENT	76305, PSDTX1058
I-01/I-02	INCINERATORS/SCRUBBERS	76305, PSDTX1058
SPEC PVC	SPECIALTY PVC PLANT	76305, PSDTX1058
T-D01	DIESEL STORAGE TANK	76305, PSDTX1058
T-D02	DIESEL STORAGE TANK	76305, PSDTX1058
TF-01	TANK FARM PIPING EQUIPMENT	76305, PSDTX1058

Appendix A

Acronym List 24

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM	actual cubic feet per minute
AMOC	alternate means of control
ARP	Acid Rain Program
ASTM	American Society of Testing and Materials
B/PA	Beaumont/Port Arthur (nonattainment area)
CAM	Compliance Assurance Monitoring
CD	control device
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
COMS	continuous opacity monitoring system
CVS	closed vent system
D/FW	Dallas/Fort Worth (nonattainment area)
EP	emission point
EPA	U.S. Environmental Protection Agency
EU	emission unit
FCAA Amendments	Federal Clean Air Act Amendments
FOP	federal operating permit
gr/100 scf	grains per 100 standard cubic feet
HAP	hazardous air pollutant
H/G/B	Houston/Galveston/Brazoria (nonattainment area)
H ₂ S	hydrogen sulfide
ID No.	identification number
lb/hr	pound(s) per hour
MACT	Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr	Million British thermal units per hour
NA	nonattainment
N/A	not applicable
NADB	National Allowance Data Base
NESHAP	National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO _x	nitrogen oxides
NSPS	New Source Performance Standard (40 CFR Part 60)
NSR	New Source Review
ORIS	Office of Regulatory Information Systems
Pb	lead
PBR	Permit By Rule
PEMS	predictive emissions monitoring system
PM	particulate matter
ppmv	parts per million by volume
PRO	process unit
PSD	prevention of significant deterioration
psia	pounds per square inch absolute
SIP	state implementation plan
SO ₂	sulfur dioxide
TCEQ	Texas Commission on Environmental Quality
TSP	total suspended particulate
TVP	true vapor pressure
U.S.C.	United States Code
VOC	volatile organic compound

Appendix B

Major NSR Summary Table 26

Major NSR Summary Table

Permit Number: 76305 and PSDTX1058					Issuance Date: January 26, 2018		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
I-01 and I-02 (7)	Incinerator/Scrubbers (The TPY rate is for both Scrubber Stacks I-01 and I-02 combined. The lb/hr rate is for each individual EPN)	VOC	0.55	2.39	13,14,15,16,17,21,34,39	13,14,15,16,17,21,28,31,33,34,39	14, 17,21,28
		NO _x	14.23	62.31			
		CO	2.00	8.75			
		PM ₁₀	0.02	0.09			
		SO ₂	0.01	0.02			
		HCl	0.26	1.14			
		Cl ₂	0.51	2.22			
		VCM	0.49	2.15			
		VAM	0.03	0.12			
		NH ₃	0.12	0.53			
DD-B08	Train 1A Dryer Combustion Emissions	VOC	0.28	1.23	21	21,28,31	21,28
		NO _x	2.61	11.43			
		CO	7.83	34.28			
		PM	5.04	17.65			
		PM ₁₀	0.76	2.65			
		SO ₂	0.03	0.13			
DD-B08	Train 1A Dryer	VOC	108.74	103.25	9,11,21	9,11,21,28,31	21,28,29
		VCM	37.86	49.10			
		VAM	58.55	50.40			
		Ethanol	12.33	3.75			
		NH ₃	58.55	154.58			
DD-B10	Train 1B Dryer Combustion Emissions	VOC	0.28	1.23	21	21,28,31	21,28
		NO _x	2.61	11.43			
		CO	7.83	34.28			
		PM	5.04	17.65			
		PM ₁₀	0.76	2.65			

Permit Number: 76305 and PSDTX1058					Issuance Date: January 26, 2018		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		SO ₂	0.03	0.13			
DD-B10	Train 1B Dryer	VOC	108.74	103.25	9,11,21	9,11,21,28,31	21,28,29
		VCM	37.86	49.10			
		VAM	58.55	50.40			
		Ethanol	12.33	3.75			
		NH ₃	58.55	154.58			
BD-B04	Train 2 Dryer Combustion Emissions	VOC	0.12	0.52	21	21,28,31	21,28
		NO _x	1.11	4.86			
		CO	3.33	14.59			
		PM	1.77	6.20			
		PM ₁₀	0.02	0.06			
		SO ₂	0.01	0.06			
BD-B04	Train 2 Dryer	VOC	28.41	65.66	9,11,21	9,11,21,28,31	21,28,29
		VCM	11.08	19.98			
		VAM	17.33	45.69			
EG-01	Diesel Engine for Standby Power	VOC	1.70	0.04		28,31	28
		NO _x	20.96	0.55			
		CO	4.52	0.12			
		PM ₁₀	1.49	0.04			
		SO ₂	1.39	0.04			
EG-02	Diesel Engine for Standby Power	VOC	1.70	0.04		28,31	28
		NO _x	20.96	0.55			
		CO	4.52	0.12			
		PM ₁₀	1.49	0.04			
		SO ₂	1.39	0.04			
EG-03	Diesel Engine for Standby Fire Water Pump	VOC	1.35	0.04		28,31	28
		NO _x	16.59	0.43			
		CO	3.57	0.09			
		PM ₁₀	1.18	0.03			
		SO ₂	1.10	0.03			

Permit Number: 76305 and PSDTX1058					Issuance Date: January 26, 2018		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
EG-04	Diesel Engine for Standby Power	VOC	1.35	0.04		28,31	28
		NO _x	16.59	0.43			
		CO	3.57	0.09			
		PM ₁₀	1.18	0.03			
		SO ₂	1.10	0.03			
T-03	Aqua Ammonia Storage Tank	NH ₃	2.73	0.14		28,31	28
FUG-01	Process Area Piping Component Fugitives (5)	VOC	0.60	2.64	20,22,23,24,25,26	20,22,23,24,25,26,28,31	22,26,28
		VCM	0.57	2.48			
		VAM	0.04	0.16			
		NH ₃	0.03	0.13			
TF-01	Tank Farm Piping Component Fugitives (5)	VOC	0.07	0.29	20,22,23,24,26	20,22,23,24,26,28,31	20,22,26,28
		VCM	0.05	0.23			
		VAM	0.01	0.06			
CT-01	Cooling Tower No. 1	VOC	1.25	5.48	18	18,28,31	28
		VCM	1.19	5.21			
		VAM	0.06	0.27			
		PM	4.14	18.15			
		PM ₁₀	0.62	2.70			
		PM _{2.5}	0.01	0.02			
LPV-01	Low Pressure Vent - Trains 1 and 2 Reactor Opening Losses (6)	VOC	13.05	4.76	10,34	10,28,31,34	28
		VCM	13.05	4.76			
LPV-03	Low Pressure Vent - Trains 1 and 2 Downstream Losses	VOC	2.69	3.66		28,31	28
		VCM	2.69	3.66			
LPV-04	Low Pressure Vent - Train 1 and 2 Additive Building	VOC	5.95	3.00		28,31	28
		NH ₃	7.88	6.58			
LPV-05	Low Pressure Vent -	VOC	2.70	1.00			

Permit Number: 76305 and PSDTX1058					Issuance Date: January 26, 2018		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
	Trains 1 and 2 Slurry Treatment Area	VCM	0.27	0.10		28,31	28
CD-B02	CoPolymer Check Weigh Bin No. 1	PM ₁₀	0.03	0.12	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
CD-B18	CoPolymer Resin Bagger	PM ₁₀	0.50	1.68	27	27,28,31	27,28
		PM _{2.5}	0.02	0.05			
CD-B27	CoPolymer Check Weigh Bin No. 2	PM ₁₀	0.03	0.12	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
CD-B28	CoPolymer Loading Baghouse	PM ₁₀	0.62	0.90	27	27,28,31	27,28
		PM _{2.5}	0.02	0.03			
CD-B29	CoPolymer Nuisance Dust Pickup	PM ₁₀	0.04	0.12	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
BD-B06	Blending Resin Check Weigh Bin No. 1	PM ₁₀	0.02	0.07	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
BD-B07	Blending Resin Nuisance Dust Pick Up	PM ₁₀	0.54	1.81	27	27,28,31	27,28
		PM _{2.5}	0.02	0.06			
BD-B10	Train 2 Hopper Vent	PM ₁₀	0.02	0.02	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
BD-B19	Blending Resin Bagger	PM ₁₀	0.62	0.90	27	27,28,31	27,28
		PM _{2.5}	0.02	0.03			
BD-B28	Blending Resin Check Weigh Bin No. 2	PM ₁₀	0.02	0.07	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
BD-B50	Blending Resin Check Weigh Bin No. 3	PM ₁₀	0.03	0.12	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			

Permit Number: 76305 and PSDTX1058					Issuance Date: January 26, 2018		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
BD-B51	Blending Resin Check Weigh Bin No. 4	PM ₁₀	0.03	0.12	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
BD-B52	Blending Resin Loading Baghouse	PM ₁₀	0.03	0.11	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
BD-B53	Blending Resin Separator	PM ₁₀	0.03	0.10	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
BD-B54	Blending Resin Separator	PM ₁₀	0.29	0.88	27	27,28,31	27,28
		PM _{2.5}	0.01	0.03			
BD-B55	Blending Resin Separator	PM ₁₀	0.29	0.88	27	27,28,31	27,28
		PM _{2.5}	0.01	0.03			
DD-B12	Grinder No. 1A	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B13	Grinder No. 1B	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B14	Grinder No. 1C	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B15	Grinder No. 2A	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B16	Grinder No. 2B	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B17	Grinder No. 2C	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B20	Train 1 Bagger Station No. 1	PM ₁₀	0.75	2.52	27	27,28,31	27,28
		PM _{2.5}	0.03	0.06			
DD-B24	Bagger Station	PM ₁₀	0.75	2.52	27	27,28,31	27,28
		PM _{2.5}	0.03	0.06			
DD-B31	Grinder No. 1D	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B32	Grinder No. 1E	PM ₁₀	0.34	1.14			

Permit Number: 76305 and PSDTX1058					Issuance Date: January 26, 2018		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		PM _{2.5}	0.02	0.04	27	27,28,31	27,28
DD-B33	Grinder No. 1F	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B34	Grinder No. 1G	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B35	Grinder No. 2D	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B36	Grinder No. 2E	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B37	Grinder No. 2F	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B38	Grinder No. 2G	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B39	Separator 1A	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B40	Separator 1B	PM ₁₀	0.34	1.14	27	27,28,31	27,28
		PM _{2.5}	0.02	0.04			
DD-B41	Separator 2A	PM ₁₀	0.03	0.10	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
DD-B42	Separator 2B	PM ₁₀	0.03	0.10	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
DD-B43	Feed Hopper 1A	PM ₁₀	0.03	0.09	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
DD-B44	Feed Hopper 1B	PM ₁₀	0.03	0.09	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
DD-B45	Underground Product 1A	PM ₁₀	0.09	0.29	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
DD-B46	Underground Product 1B	PM ₁₀	0.09	0.29	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
DD-B47	Feed Hopper 2A	PM ₁₀	0.03	0.09			

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		PM _{2.5}	0.01	0.01	27	27,28,31	27,28
DD-B48	Feed Hopper 2B	PM ₁₀	0.03	0.09	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
DD-B49	Underground Product 2A	PM ₁₀	0.09	0.29	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
DD-B50	Underground Product 2B	PM ₁₀	0.09	0.29	27	27,28,31	27,28
		PM _{2.5}	0.01	0.01			
WD-01	Resin Dryer	VOC	4.47	2.57	9,11	9,11,28,31	28,29
		PM ₁₀	0.16	0.56			
		PM _{2.5}	0.01	0.02			
		VCM	2.22	0.47			
		VAM	2.25	2.11			
S-01	CoPolymer Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-02	CoPolymer Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-03	CoPolymer Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-04	CoPolymer Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-05	CoPolymer Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-09	Blending Resin Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-10	Blending Resin Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-11	Blending Resin Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-12	Blending Resin Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			

Permit Number: 76305 and PSDTX1058					Issuance Date: January 26, 2018		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
S-13	Blending Resin Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-14	Blending Resin Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-17	Dispersion Resin Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-18	Dispersion Resin Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-19	Dispersion Resin Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-20	Dispersion Resin Silo	PM ₁₀	0.12	0.42		28,31	28
		PM _{2.5}	0.01	0.02			
S-25	Dispersion Resin Silo	PM ₁₀	0.11	0.36		28,31	28
		PM _{2.5}	0.01	0.02			
S-26	Dispersion Resin Silo	PM ₁₀	0.11	0.36		28,31	28
		PM _{2.5}	0.01	0.02			
T-D01	Diesel Storage Tank	VOC	0.13	0.01		28	28
T-D02	Diesel Storage Tank	VOC	0.13	0.01		28	28
T-D03	Diesel Storage Tank	VOC	0.13	0.01		28	28
T-D04	Diesel Storage Tank	VOC	0.13	0.01		28	28
WWT-2	Wastewater Treatment Plant	VOC	5.00	18.26	19	19,28,31	28
		VCM	0.44	1.60			
		VAM	2.57	9.36			
		NH ₃	2.30	8.40			
Maintenance, Startup, and Shutdown (MSS)							
SPVC-MNT	Emissions to Atmosphere	VOC	20.54	2.31	34,35,36	28,31,33,34,35,36,40	28
		PM/PM ₁₀ /PM _{2.5}	0.01	0.01			
		NH ₃	1.70	0.01			

Footnotes:

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
 - NO_x - total oxides of nitrogen
 - CO - carbon monoxide
 - PM - particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}
 - PM₁₀ - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.
 - PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
 - SO₂ - sulfur dioxide
 - HCl - hydrogen chloride
 - Cl₂ - chlorine
 - VCM - vinyl chloride monomer
 - VAM - vinyl acetate monomer
 - NH₃ - ammonia
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) Opening of reactors after every batch for cleaning prior to charging for the next batch.
- (7) Includes MSS emissions.



Texas Commission on Environmental Quality Air Quality Permit

A Permit Is Hereby Issued To
Formosa Plastics Corporation, Texas
Authorizing the Construction and Operation of
SPCV Plant
Located at Point Comfort, Calhoun County, Texas
Latitude 28° 41' 20" Longitude -96° 32' 50"

Permit: 76305 and PSDTX1058

Revision Date: January 26, 2018

Expiration Date: April 4, 2016

A handwritten signature in black ink, appearing to read "R. A. Hyl".

For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)]¹
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]
6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and

operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]

8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources-- Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)] ¹
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification in accordance with 30 TAC §101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC§ 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to "air pollution" as defined in Texas Health and Safety Code (THSC) §382.003(3) or violate THSC § 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit. ¹

¹ Please be advised that the requirements of this provision of the general conditions may not be applicable to greenhouse gas emissions.

Special Conditions

Permit Numbers 76305 and PSDTX1058

Emission Limitations

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates", and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit.

Federal Applicability

2. These facilities shall comply with all applicable requirements of U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources (NSPS) promulgated for Volatile Organic Liquid Storage Vessels in Title 40 Code of Federal Regulations, Subparts A and Kb (40 CFR Part 60, Subparts A and Kb).
3. These facilities shall comply with all applicable requirements of the EPA regulations for Source Categories promulgated for 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (a.k.a. Maximum Achievable Control Technology), Subparts A and HHHHHHH, Polyvinyl Chloride and Copolymers Production (PVC MACT). Compliance with the PVC MACT emission standards and requirements related to process wastewater which has been under reconsideration by EPA since September 28, 2012 is not required. This exception shall remain in effect until such time as EPA finalizes the reconsideration process, after which the facility must comply with the emission standards and requirements for process wastewater under the PVC MACT.
(1/18)
4. [RESERVED] **(1/18)**
5. [RESERVED] **(1/18)**

Carbon Compound Waste Gas Streams

6. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the maximum allowable emission rates table (MAERT). Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions, with the exception of the relief valves on the vinyl chloride monomer (VCM) storage spheres, PVC reactors, and PVC reactor charge tanks.

Operational Parameters

7. Annual production shall not exceed the following in pounds per rolling 12-month period: **(6/10)**

Dispersion Resin (Train 1)	270,000,000
Blending and Copolymer Resin (Train 2)	206,250,000

8. The following residual vinyl chloride monomer (RVCM) concentration limits, in parts per million by weight (ppmw), apply to commingled stripper slurry (dryer feed) for hourly limits, and apply to each batch of stripper slurry for daily and annual limits: **(6/10)**

<u>Resin Type/Train</u>	<u>Hourly Limit</u>	<u>Daily Limit</u>	<u>Annual Limit*</u>
Dispersion Resin (Train 1)	2,000	1,250	750
Blending Resin (Train 2)	300	100	100
Copolymer Resin (Train 2)	450	275	275

* Rolling 12-month basis

9. Each finished batch of stripped resin slurry shall be sampled for VCM as required by 40 CFR Part 61, Subpart F. The rolling 12-month average shall be calculated for the stripper slurry RVCM on a monthly basis in accordance with 40 CFR Part 61, Subpart F or Texas Commission on Environmental Quality (TCEQ)-approved procedure. Records of the sample results for each resin grade and rolling 12-month average RVCM concentrations shall be maintained.
10. Subject to the maximum hourly and annual allowable emission rates identified in the MAERT for EPN LPV-01 (Trains 1 and 2 Reactor Opening Losses), this permit authorizes the opening of reactors after every batch of resin for cleaning prior to charging for the next batch. Prior to opening to the atmosphere, the reactors shall be vented to the Monomer Recovery System (which then vents to the incinerators) until the VCM concentration in the reactors is sufficiently low to meet the maximum 0.04 lb VCM/ton PVC resin produced as required by 40 CFR Part 63, Subpart HHHHHHHH. The Compliance Manual referenced in these special conditions shall contain details on this sampling and calculation procedure. **(1/18)**
11. Compliance with VCM and vinyl acetate monomer (VAM) emission rates listed on the MAERT for Train 1A Dryer (EPN DD-B08), Train 1B Dryer (Emission Point No. [EPN] DD-B10), and Train 2 Dryer (EPN BD-B04) shall be demonstrated as follows: **(6/10)**

SPECIAL CONDITIONS

Permit Numbers 76305 and PSDTX1058

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- A. Dryers - Hourly: by sampling and comparing commingled dryer feed and the resin leaving the dryers once per 12-hour shift for VCM and VAM, and applying dryer throughput for that period to those differential concentrations.
- B. Dryers - Annual: The final product (bagged or bulk loading) shall be sampled once per shift, compared with dryer feed concentrations from A. above, and rolling 12-month production shall be applied to those differential concentrations, calculated once per month.

Incinerator/Scrubbers

- 12. The incinerators shall operate with no less than 99.95 percent efficiency in disposing of carbon compounds captured by the collection system.
- 13. The firebox exit temperature of Incinerators I-01 and I-02 shall be continuously monitored and recorded when VOC waste gases are directed to the incinerator(s). The minimum required combustion temperature shall be the temperature at which no less than 99.95 destruction of VOC is achieved during stack testing.
- 14. The six-minute average temperature and six-minute average oxygen concentration in the incinerators shall be at greater than the respective hourly average maintained during the most recent satisfactory stack testing.
 - A. The incinerator exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the incinerator. The temperature measurement device shall reduce the temperature readings to an averaging period of six minutes or less and record it at that frequency. The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius or $\pm 2.5^{\circ}\text{C}$.
 - B. The oxygen analyzer shall continuously monitor and record oxygen concentration when waste gas is directed to the oxidizer. It shall reduce the oxygen readings to an averaging period of 6 minutes or less and record it at that frequency. The oxygen analyzer shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified Performance Specification No. 3, 40 CFR Part 60, Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

SPECIAL CONDITIONS

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The analyzer shall be quality-assured at least semiannually using cylinder gas audits (CGAs) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, § 5.1.2, with the following exception: a relative accuracy test audit is not required once every four quarters (i.e., two successive semiannual CGAs may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive semiannual audits shall occur no closer than four months. Necessary corrective action shall be taken for all CGA exceedances of ∇ 15 percent accuracy and any continuous emissions monitoring system downtime in excess of 5 percent of the incinerator operating time. These occurrences and corrective actions shall be reported to the appropriate TCEQ Regional Director on a quarterly basis. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.

- C. Quality-assured (or valid) data must be generated when waste gas is directed to the incinerator except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the incinerator operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.
15. When either Incinerator I-01 or I-02 is on standby status, the firebox exit temperature of that stand-by incinerator shall be maintained at not less than 800°F on a rolling 60-minute average.
16. The solution flow rate to the I-01 and I-02 Incinerator/Scrubbers and the pH of the solution exiting the I-01 and I-02 Incinerator/Scrubbers shall be continuously monitored and recorded. The solution flow rate to the scrubbers and the pH of the solution exiting the scrubbers shall not be less than that maintained during the last satisfactory stack test.

The pH of incinerator scrubbing solutions and the solution flow rates shall be maintained at levels not less than those maintained during the required stack testing. The pH shall be continuously analyzed and recorded at least once every six minutes. Each monitoring device shall be cleaned with an automatic cleaning system, or cleaned once every two weeks using hydraulic, chemical, or mechanical cleaning. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least weekly, whichever is more frequent, and shall be accurate to within +0.5 pH unit. The scrubber liquid flow rate shall be monitored using magnetic type flow meters and recorded at least once an hour.

SPECIAL CONDITIONS

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Quality-assured (or valid) data must be generated when waste gas is routed to the scrubber except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in hours) that the waste gas is routed to the scrubber over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

17. The following requirements apply to capture systems for each incinerator/scrubber system designated as EPNs I-01 and I-02. **(02/11)**

A. If used to control pollutants other than particulate, either:

- (1) Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or
- (2) Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.

B. The control device shall not have a bypass; or

If there is a bypass for the control device, comply with either of the following requirements:

- (1) Install a flow indicator that records and verifies zero flow at least once every 15 minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
- (2) Once a month, inspect the valves, verifying the position of the valves and the condition of the car seals prevent flow out the bypass.

A deviation shall be reported if the monitoring or inspections indicate bypass of the control device.

- C. If any of the above inspections are not satisfactory, the permit holder shall promptly take necessary corrective action.

Cooling Towers

18. The VOC associated with cooling tower water shall be monitored weekly with an air stripping system meeting the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition), or an approved equivalent sampling method. The results of the monitoring, cooling water flow rate and maintenance activities on the cooling water system shall be recorded. The monitoring results and cooling water hourly mass flow rate shall be used to determine cooling tower hourly VOC emissions. The rolling 12-month cooling water emission rate shall be recorded on a monthly basis and be determined by summing the VOC emissions between VOC monitoring periods over the rolling 12-month period. The emissions between VOC monitoring periods shall be obtained by multiplying the total cooling water mass flow between cooling water monitoring periods by the higher of the two VOC monitored results.

Cooling water VOC concentrations above 50 ppbw indicate faulty equipment. Equipment shall be maintained so as to minimize VOC emissions into the cooling water. Faulty equipment shall be repaired at the earliest opportunity but no later than the next scheduled shutdown of the process unit in which the leak occurs.

Cooling water shall be sampled once a week for total dissolved solids (TDS) and once a day for conductivity. Dissolved solids in the cooling water drift are considered to be emitted as particulate matter equal to or less than 10 microns in diameter (PM₁₀). The data shall result from collection of water samples from the cooling tower feed water and represent the water being cooled in the tower. Water samples should be capped upon collection, and transferred to a laboratory area for analysis. The analysis method for TDS shall be EPA Method 160.1, ASTM D5907, and SM 2540 C [SM - 19th edition of Standard Methods for Examination of Water]. The analysis method for conductivity shall be ASTM D1125-95A and SM2510 B. Use of an alternative method shall be approved by the TCEQ Regional Director prior to its implementation. **(6/10)**

19. All process wastewater before the PVC stripping systems shall be collected in a totally enclosed collection system, and vents to the atmosphere shall not be permitted. All process wastewater shall be stripped in wastewater stripper WWT-1 before the wastewater stream can enter the wastewater treatment plant (EPN WWT-2). Overhead gases from WWT-1 shall either be recovered or routed to the incinerators. A method for sampling and measuring flow rate of waste streams entering the wastewater treatment plant for purposes of demonstrating compliance with the MAERT must be approved by the TCEQ prior to start of operation of this facility.

Storage Tanks

20. Storage tanks containing VAM will be designed with a fixed roof and a closed vent system that routes air emissions to the Monomer Recovery System, or a control device, in compliance with the requirements of 40 CFR Part 63, Subpart HHHHHHHH.

Stack Sampling

21. The permit holder shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere, and demonstrate compliance with the MAERT, from the following:

<u>Source Name/Stack</u>	<u>EPN</u>
Incinerator/Scrubber I-01	I-01
Incinerator/Scrubber I-02	I-02
Train 1A Dryer	DD-B08
Train 1B Dryer	DD-B10
Train 2 Dryer	BD-B04

The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and the EPA Reference Methods.

Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for 40 CFR Part 60 testing which must have EPA approval shall be submitted to the TCEQ Regional Director.

- A. The appropriate TCEQ Regional Office shall be notified not less than 45 days prior to sampling. The notice shall include:
- (1) Proposed date for pretest meeting.
 - (2) Date sampling will occur.
 - (3) Name of firm conducting sampling.
 - (4) Type of sampling equipment to be used.

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- (5) Method or procedure to be used in sampling.
- (6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.
- (7) Procedure/parameters to be used to determine worst case emissions during the sampling period.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for the test reports. The TCEQ Regional Director must approve any deviation from specified sampling procedures.

- B. Air contaminants emitted from the incinerator/scrubber systems to be tested for include (but are not limited to) total VOC, VCM, VAM, hydrogen chloride, NO_x, NH₃, CO, and chlorine. Air contaminants emitted from the dryers to be tested for include (but are not limited to) VCM, VAM, PM, PM₁₀, NO_x, CO.
- C. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial start-up of the facilities, and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate TCEQ Regional Office.
- D. The facility being sampled shall operate in a manner which provides maximum flow rates to the stack during stack emission testing. These conditions/parameters and any other primary operating parameters that affect the emission rate shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in paragraph A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

During subsequent operations, if the above conditions/parameters are more severe (resulting in higher emission rates) than those recorded during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Section Manager for the region.

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- E. Copies of the final sampling report shall be forwarded to the offices below within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions entitled "Chapter 14, Contents of Sampling Reports" of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TCEQ Regional Office.

One copy to each local air pollution control program.

Sampling ports and platform(s) shall be incorporated into the design of stacks according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities" of the TCEQ Sampling Procedures Manual. Alternate sampling facility designs must be submitted for approval to the TCEQ Regional Director. **(6/10)**

Fugitive Emission Monitoring

22. Piping, Valves, Connectors, Pumps, Agitators, and Compressors - 28VHP **(11/12)**

Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment:

- A. The requirements of paragraphs F and G shall not apply (1) where the Volatile Organic Compound (VOC) has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (psia) at 68° F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made readily available upon request.

The exempted components may be identified by one or more of the following methods:

- (1) piping and instrumentation diagram (PID);
- (2) a written or electronic database or electronic file;
- (3) color coding;
- (4) a form of weatherproof identification; or
- (5) designation of exempted process unit boundaries.

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- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in subparagraph A above. If an unsafe to monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe to monitor times. A difficult to monitor component for which quarterly monitoring is specified may instead be monitored annually.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period;

- (1) a cap, blind flange, plug, or second valve must be installed on the line or valve; or

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- (2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once within the 72 hour period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.

- F. Accessible valves shall be monitored by leak checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. If a relief valve is equipped with rupture disc, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity.

A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

The gas analyzer shall conform to requirements listed in Method 21 of 40 CFR part 60, appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

Replacements for leaking components shall be re-monitored within 15 days of being placed back into VOC service.

- G. Except as may be provided for in the special conditions of this permit, all pump, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or

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detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system.

Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

- H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump, compressor, and agitator seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days and a record of the attempt shall be maintained.
- I. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging within 15 days of the detection of the leak. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shutdown as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.
- J. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings

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recorded. Records of physical inspections shall be noted in the operator's log or equivalent.

- K. Alternative monitoring frequency schedules of 30 TAC §§ 115.352 - 115.359 or National Emission Standards for Organic Hazardous Air Pollutants, 40 CFR Part 63, Subpart H, may be used in lieu of Items F through G of this condition.
 - L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS) and does not constitute approval of alternative standards for these regulations.
 - M. With respect to Special Condition 22, new and reworked is meant to apply to major changes in piping. It is not intended to apply to minor activities including but not limited to: installation/replacement of small number of valves and flanges; minor repairs; gasket replacement; repair/replacement of small sections of piping, etc. Also, "process pipelines" does not apply to underground process sewer lines, cooling tower water, fire water, etc. Additionally, the requirement for new and reworked buried connectors to be welded will not apply if compliance would require a process unit shutdown or would create a safety issue including, but not limited to, close proximity of other process pipelines and equipment or unsafe access to the piping.
23. In lieu of the 2000 ppmv VOC limit in Paragraph H of Special Condition 22, damaged or leaking pump, compressor, and agitator seals found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained. (02/11)

Piping, Valves, Connectors, Pumps, And Compressors In VOC Service - 28CNTQ

24. Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment:
- A. In addition to the weekly physical inspection required by Item E of the 28VHP condition, all accessible connectors in gas/vapor and light liquid service shall be monitored quarterly with an approved gas analyzer in accordance with Items F through J of the 28VHP condition.

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- B. In lieu of the monitoring frequency specified in paragraph A, connectors may be monitored on a semi-annual basis if the percent of connectors leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

Connectors may be monitored on an annual basis if the percent of connectors leaking for two consecutive semi-annual monitoring periods is less than 0.5 percent.

If the percent of connectors leaking for any semi-annual or annual monitoring period is 0.5 percent or greater, the facility shall revert to quarterly monitoring until the facility again qualifies for the alternative monitoring schedules previously outlined in this paragraph.

- C. The percent of connectors leaking used in paragraph B shall be determined using the following formula:

$$(Cl + Cs) \times 100/Ct = Cp$$

Where:

Cl= the number of connectors found leaking by the end of the monitoring period, either by Method 21 or sight, sound, and smell.

Cs= the number of connectors for which repair has been delayed and are listed on the facility shutdown log.

Ct= the total number of connectors in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including non-accessible and unsafe-to-monitor connectors.

Cp = the percentage of leaking connectors for the monitoring period.

25. Piping, Valves, Pumps, And Compressors In Ammonia Service

- A. Audio, olfactory, and visual checks for ammonia leaks within the operating area shall be made every four hours.

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- B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take the following actions:

- (1) Isolate the leak.
- (2) Commence repair or replacement of the leaking component.
- (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

26. These facilities shall comply with all applicable requirements of the EPA regulations on NESHAPS for Source Categories promulgated for Equipment Leaks - Control Level 2 Standards in 40 CFR Part 63, Subparts A and UU. Where similar requirements exist among this subpart and the 28VHP and 28CNTQ programs above, the most stringent requirement shall apply.

Baghouses

27. The facility covered by this permit shall not operate unless all associated air pollution abatement equipment is maintained in good working order and operating during normal facility operations. The following steps shall be performed, at a minimum, to ensure the proper operation of the baghouses and cyclones:
- A. A daily visible emissions observation will be conducted for all vents to evaluate the presence or absence of visible emissions. When there are visible emissions from a baghouse or cyclone, the operation associated with the event shall be shut down as soon as practicable, the entire baghouse or cyclone shall be inspected, and the failed or damaged parts shall be repaired or replaced. Records shall be maintained of daily visible emissions observations.
 - B. An inspection of the bag houses will be performed once every two weeks which will include: inspection for leaks, pulse and reverse-air mechanism check, and exhaust inspection for emissions. Inspections are not required when weather conditions prohibit safe access to bag house but will be documented on the checklist. Detailed maintenance inspections will be performed every six months

or whenever visual checks indicate that maintenance may be necessary.
Records shall be maintained of all inspections and maintenance performed.

- C. A spare parts inventory with an adequate number of replacement bags for each baghouse shall be maintained on-site at all times. All baghouses shall undergo a preventative maintenance inspection on an annual basis.
- D. The TCEQ Regional Director shall be notified as soon as possible of any baghouse or cyclone system malfunction that results in visible emissions.
- E. Each baghouse shall utilize either pulse-air or reverse-air cleaning, and shall be equipped with a continuous differential pressure monitoring system. Within 60 days of the start of operations, the holder of the this permit shall submit to the TCEQ Corpus Christi Regional Office details of how the differential pressure monitoring results will be used to evaluate the performance of each baghouse.

Compliance Manual

- 28. Within 60 days of the start of operations, the holder of this permit shall submit to the TCEQ Corpus Christi Regional Office documentation which demonstrates that the holder is achieving compliance with all the conditions of the permit and all allowable emission rates listed on the MAERT. This documentation shall consist of a statement explaining how each requirement in a condition is being met, and how compliance with all allowable emission rates listed on the MAERT is being demonstrated. It will include a sample of each record sheet required to be maintained by any condition and a listing of all testing required with test dates.

Additional Requirements

- 29. No later than 12 months after the plant begins operations, the permit holder will submit either a permit alteration request or an amendment application, as applicable, based upon comparisons with actual data, to increase or decrease allowable emission rates from the dryers for VCM, VAM, ethanol, and ammonia.
- 30. The TCEQ Agreed Order 2000-1144-AIR-E, dated October 27, 2004, requires siting of a new open path FTIR and SUMMA canister air monitoring system north of the Formosa site fence line. The system is to be complete and collecting data by June 1, 2006. If it is determined from data collected by this system that a condition of air pollution exists due to VCM emissions from the PVC Specialty Plant, further controls will be required.

Recordkeeping

31. All records required by the special conditions of this permit shall be kept and maintained in accordance with General Condition No. 7.

Maintenance, Startup, and Shutdown (MSS)

32. This permit authorizes air emissions from the planned maintenance, startup, and shutdown (MSS) activities identified in the following table performed at the facilities authorized by this permit.

Facilities	Description/ Emissions Activity	EPN
All facilities*	Depressurize and purge to control per Special Condition 34	I-01, I-02
All facilities*	Degas facilities to atmosphere after control per Special Condition 34	SPVC-MNT
All facilities*	Fill and/or vent to control during startup	I-01, I-02
Baghouses/bag filters	Repair, replace, maintain	SPVC-MNT
Incinerators/Scrubbers	Startup	I-01, I-02
Instruments/analyzers	Maintenance and calibrations	SPVC-MNT
All facilities	Sampling and sight glass cleaning	SPVC-MNT

* - all facilities include piping

In addition, planned MSS emissions emitted from routine emission points are authorized provided the emissions are compliant with the respective MAERT allowable emission rates and special conditions. This permit authorizes emissions from the following temporary facilities used to support planned MSS activities at permanent site facilities: control devices meeting the requirements of Special Condition 39. Emissions from temporary facilities are authorized provided the temporary facility (a) does not remain on the plant site for more than 12 consecutive months, (b) is used solely to support planned MSS activities at the permanent facilities authorized by this permit, and (c) does not operate as a replacement for an existing authorized facility. **(11/12)**

33. This permit authorizes the emissions from the facilities identified in Special Condition 32 for the planned MSS activities summarized in the MSS Activity Summaries (Attachments A, B and C) attached to this permit.
- A. Attachment A identifies the inherently low emitting MSS activities that may be performed at the site. Emissions from activities identified in Attachment A shall be considered to be equal to the potential to emit represented in the permit

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application. The estimated emissions from the activities listed in Attachment A must be revalidated annually. This revalidation shall consist of the estimated emissions for each type of activity and the basis for that emission estimate.

Routine maintenance activities, as identified in Attachment B may be tracked through the work orders or equivalent. Emissions from activities identified in Attachment B shall be calculated using the number of work orders or equivalent that month and the emissions associated with that activity identified in the permit application.

B. The performance of each planned MSS activity identified in Attachment C and the emissions associated with it shall be recorded and include at least the following information:

- (1) The process unit at which emissions from the MSS activity occurred, including the emission point number and common name of the process unit;
- (2) The type of planned MSS activity and the reason for the planned activity;
- (3) The common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;
- (4) The date and time of the MSS activity and its duration;
- (5) The estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it.

The emissions shall be estimated using the methods identified in the permit application, PI-1 dated January 3, 2008, and consistent with good engineering practice.

All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis. **(11/12)**

34. Except for storage tanks and instrumentation/analyzer maintenance, process units and facilities shall be depressurized, degassed, and placed back into service in accordance with the following requirements.

A. The process equipment shall be vented to a control device or a controlled recovery system during depressurization.

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- B. All liquids from process equipment or storage vessels must be removed to the maximum extent practical prior to opening equipment or commencing depressurization, degassing and/or maintenance. Equipment that only contains material with VOC partial pressure less than 0.50 psi at the normal process temperature and 95°F may be opened to the atmosphere after liquids are removed as required by this condition. Liquids must be drained into a closed vessel unless prevented by the physical configuration of the equipment. If it is necessary to drain liquid into an open pan or sump, the liquid must be covered or transferred to a covered vessel within one hour of being drained.
- C. If mixed phase materials must be removed from process equipment during depressurization, liquids removal, or degassing, the cleared material shall be routed to a knockout drum or equivalent to allow for managed initial phase separation. Any vents in the knockout drum or equivalent must be routed to a control device or a controlled recovery system. Control must remain in place while mixed phase material removal is being performed.
- D. Facilities shall be degassed using practices that ensure air contaminants are removed from the system through the control device or controlled recovery system to the extent allowed by process equipment or storage vessel design. Records shall be maintained of the control device or recovery system utilized with the estimated emissions from controlled and uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.
- E. After degassing in accordance with Special Condition 34.D, the VOC concentration in the facilities being degassed shall be verified to be below 10,000 ppmv or less than 10 percent of the lower explosive limit (LEL) using one of the methods below prior to opening directly to atmosphere.
 - (1) For MSS activities other than process unit startup, shutdown, hydroblasting, or turnaround, the following option may be used in lieu of (2) below. The facilities being prepared for maintenance shall not be vented directly to atmosphere, except as necessary to verify an acceptable VOC concentration and establish isolation of the work area, until the VOC concentration has been verified to be less than 10 percent of the lower explosive limit (LEL) per the site safety procedures.
 - (2) Documentation shall be maintained of the locations and/or identifiers where the purge gas or steam enters the process equipment or storage vessel and the exit points for the purge gases. If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system before the vent

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stream may be sampled to verify acceptable-VOC concentration prior to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of Special Condition 35. The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 10,000 ppmv or less than 10 percent of the lower explosive limit (LEL). Documented plant procedures used to de-inventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures) that achieve at least the same level of purging may be used in lieu of the above.

F. Gases and vapors with VOC partial pressure greater than 0.50 psi may be vented directly to atmosphere if all the following criteria are met:

- (1) It is not technically practicable to depressurize or degas, as applicable, into the process.
- (2) There is not an available connection to a plant control system (flare or incinerator).
- (3) There is no more than 50 lb of air contaminant to be vented to atmosphere during shutdown or startup, as applicable.

Except as noted in Attachment A, all instances of venting directly to atmosphere per Special Condition 34.F must be documented when occurring as part of any MSS activity. The emissions associated with venting without control must be included in the activity record for those planned MSS activities. **(11/12)**

35. Air contaminant concentration shall be measured using an instrument/detector meeting one of the following methods:

A. VOC concentration shall be measured using an instrument meeting all the requirements specified in EPA Method 21 (40 CFR 60, Appendix A) with the following exceptions:

- (1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate response factor shall be recorded.

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- (2) Sampling shall be performed as directed by this permit in lieu of section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least 5 minutes, recording VOC concentration each minute. The highest measured VOC concentration shall not exceed the specified VOC concentration limit prior to uncontrolled venting.

B. Colorimetric gas detector tubes may be used to determine air contaminant concentrations if they are used in accordance with the following requirements.

- (1) The air contaminant concentration measured must be less than 80 percent of the range of the tube. If the maximum range of the tube is greater than the release concentration defined in (3) the concentration measured must be at least 20 percent of the maximum range of the tube.

- (2) The tube is used in accordance with the manufacturer's guidelines.

- (3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

10,000*mole fraction of the total air contaminants present in the gas stream that can be detected by the tube.

- (4) The mole fraction of the total air contaminants present in the gas stream that can be detected by the tube may be estimated based on process knowledge. The release concentration and basis for its determination shall be recorded.

- (5) Records shall be maintained of the tube type, range, measured concentrations, and time the samples were taken.

C. Lower explosive limit measured with a lower explosive limit detector. **(5/13)**

- (1) The detector shall be calibrated monthly with a certified propane gas standard at 50% of the lower explosive limit (LEL) for propane. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.
- (2) A daily functionality test shall be performed on each detector using the same certified gas standard used for calibration. The LEL monitor shall

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read no lower than 90% of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.

- (3) A certified methane gas standard equivalent to 50% of the LEL for propane may be used for calibration and functionality tests provided that the LEL response is within 95% of that for propane.

D. As an alternative to an instrument/detector, the analysis may be conducted in a laboratory. Bag samples of the gas discharged may be drawn and taken to a Formosa laboratory to be analyzed by gas chromatography (GC). A minimum of two bag samples shall be drawn approximately ten minutes apart. A Tedlar bag, or a bag appropriate for the material to be sampled, shall be used and shall have a valve to seal gas in the bag. The samples shall be drawn as follows:

- (1) The sample point on the equipment being cleared shall be purged sufficiently to ensure a representative sample at the sample valve.
- (2) The sample bag shall be connected directly to the sample valve.
- (3) The sample valve and sample bag shall be opened to allow the bag to fill to approximately 80% of capacity. The sample connections shall be fitted such that no air is drawn into the sample bag.
- (4) The two valves shall then be closed to seal the sample in the bag.
- (5) The sample bag shall then be disconnected and placed in a dark container out of direct sunlight for transport to the analyzer.
- (6) This process is repeated to collect additional samples.
- (7) The sample shall be analyzed within 12 hours of collection.

The laboratory GC shall meet or exceed the requirements of 40 CFR 60, Appendix A, Method 18 Sections 6 (Equipment and Supplies), 7 (Reagents and Standards), 9 (Quality Control), and 10 (Calibration and Standards). The sample shall be analyzed per Section 8.2.1.1.2 of Method 18, except the analysis does not need to be performed in triplicate. The highest measured VOC concentration shall not exceed the specified VOC concentration limit prior to uncontrolled venting. **(11/12)**

36. This permit authorizes emissions from fixed roof storage tanks. The following requirements apply.

- A. If the VOC partial pressure of the liquid previously stored in the tank is greater than 0.50 psi at 95°F, controlled degassing shall be completed as follows:

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- (1) Any gas or vapor removed must be routed to a control device or a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. The locations and identifiers of vents other than permanent roof fittings and seals, control device or controlled recovery system, and controlled exhaust stream shall be recorded. There shall be no other gas/vapor flow out of the storage tank when degassing to the control device or controlled recovery system.
 - (2) The vapor space shall be vented using good engineering practice to ensure air contaminants are flushed out of the tank through the control device or controlled recovery system to the extent allowed by the storage tank design.
 - (3) A volume of purge gas equivalent to twice the volume of the vapor space must have passed through the control device or into a controlled recovery system, before the vent stream may be sampled to verify acceptable VOC concentration. The measurement of purge gas volume shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in Special Condition 35.
 - (4) The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged.
 - (5) Degassing must be performed every 24 hours unless there is no standing liquid in the tank or the VOC partial pressure of the remaining liquid in the tank is less than 0.15 psia.
- B. The tank shall not be opened or ventilated without control, except as allowed by (1) or (2) below until one of the criteria in part C of this condition is satisfied.
- (1) Minimize air circulation in the tank vapor space.
 - (a) One manway may be opened to allow access to the tank to remove or de-volatilize the remaining liquid. Other manways or access points may be opened as necessary to remove or de-volatilize the remaining liquid. Wind barriers shall be installed at all open manways and access points to minimize air flow through the tank.
 - (b) Access points shall be closed when not in use
 - (2) Minimize time and VOC partial pressure.

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- (a) The VOC partial pressure of the liquid remaining in the tank shall not exceed 0.044 psi as documented by the method specified in part D.(1) of this condition;
 - (b) Records shall be maintained for the duration of uncontrolled ventilation, and the date and time all standing liquid was removed from the tank.
- C. The tank may be opened without restriction and ventilated without control, after all standing liquid has been removed from the tank or the liquid remaining in the tank has a VOC partial pressure less than 0.02 psia. These criteria shall be demonstrated in any one of the following ways.
 - (1) Low VOC partial pressure liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC partial pressure of the liquid mixture remaining in the tank to less than 0.02 psia. This liquid shall be added during tank degassing if practicable. The estimated volume of liquid remaining in the drained tank and the volume and type of liquid added shall be recorded. The liquid VOC partial pressure may be estimated based on this information and engineering calculations.
 - (2) If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:
 - (a) Take a representative sample of the liquid remaining in the tank and verify no visible sheen using the static sheen test from 40 CFR 435 Subpart A Appendix 1.
 - (b) Take a representative sample of the liquid remaining in the tank and verify hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).
 - (c) Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1000 ppmv through the procedure in Special Condition 35.
 - (3) No standing liquid verified through visual inspection.

The permit holder shall maintain records to document the method used to release the tank.
- D. The occurrence of each degassing and the associated emissions shall be recorded and the rolling 12-month tank emissions shall be updated on a monthly basis. These records shall include at least the following information:

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- (1) the identification of the tank and emission point number, and any control devices or recovery systems used to reduce emissions;
 - (2) the reason for the tank maintenance;
 - (3) for the purpose of estimating emissions, the date, time, and other information specified for each of the following events:
 - (a) all liquid was pumped from the tank to the extent practical,
 - (b) start and completion of controlled degassing, and total volumetric flow,
 - (c) all standing liquid was removed from the tank or any transfers of low VOC partial pressure liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC partial pressure to <0.02 psi,
 - (d) if there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow.
 - (4) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events b and d with the data and methods used to determine it. The emissions associated with fixed roof storage tank activities shall be calculated using the methods described in the permit application. **(11/12)**
37. Bag filter maintenance shall be performed in a manner to minimize particulate matter emissions and minimize down time. **(11/12)**
38. MSS activities represented in the permit application may be authorized under permit by rule only if the procedures, emission controls, monitoring, and recordkeeping are the same as those required by this permit. **(11/12)**
39. Control devices required by this permit for emissions from planned MSS activities are limited to those types identified in this condition. Control devices shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Each device used must meet all the requirements identified for that type of control device.

Controlled recovery systems identified in this permit shall be directed to an operating process or to a collection system that is vented through a control device meeting the requirements of this permit condition.

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- A. The plant Incinerator/Scrubber system (EPNs: I-01 and I-02) shall operate as specified in Special Conditions 12 through 16.
- 40. With the exception of the MAERT emission limits, the MSS permit conditions become effective 180 days after this permit amendment, PI-1 dated January 3, 2008, has been approved. During the 180 day period, the permit holder shall maintain records of MSS activities. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded. **(11/12)**

Dated: January 18, 2018

Permit 76305 and PSDTX1058

Attachment A

Inherently Low Emitting Activities

Activity	Emissions
	VOC
Soap and other aqueous based cleaners	X
Maintenance on water treatment systems	X
Replacement of analyzer filters and screens	X
Cleaning sight glasses	X

Dated: November 30, 2012

Permit 76305 and PSDTX1058

Attachment B

Routine Maintenance Activities

Facilities	Description/Emission Activities	EPN
Columns	Vent to atmosphere	SPVC-MNT
Silos	Vent to atmosphere	SPVC-MNT
Piping, Valves and Relief Valves	Vent to atmosphere	SPVC-MNT
Pumps	Vent to atmosphere	SPVC-MNT
Filters/Strainers	Vent to atmosphere	SPVC-MNT
Compressors	Vent to atmosphere	SPVC-MNT
Heat Exchangers	Vent to atmosphere	SPVC-MNT
Baghouses/Bag Filters	Vent to atmosphere	SPVC-MNT
Cyclone/Elutriator	Vent to atmosphere	SPVC-MNT

Dated: November 30, 2012

Permit 76305 and PSDTX1058

Attachment C

SIGNIFICANT MSS ACTIVITY SUMMARY

The following activities are subject to the full recordkeeping requirements specified by Special Condition 30.

Activities not listed on Attachments A and B or not otherwise authorized

Dated: November 30, 2012

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 76305 and PSDTX1058

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
I-01 and I-02 (7)	Incinerator/Scrubbers (The TPY rate is for both Scrubber Stacks I-01 and I-02 combined. The lb/hr rate is for each individual EPN)	VOC	0.55	2.39
		NO _x	14.23	62.31
		CO	2.00	8.75
		PM ₁₀	0.02	0.09
		SO ₂	0.01	0.02
		HCl	0.26	1.14
		Cl ₂	0.51	2.22
		VCM	0.49	2.15
		VAM	0.03	0.12
		NH ₃	0.12	0.53
DD-Bo8	Train 1A Dryer Combustion Emissions	VOC	0.28	1.23
		NO _x	2.61	11.43
		CO	7.83	34.28
		PM	5.04	17.65
		PM ₁₀	0.76	2.65
		SO ₂	0.03	0.13

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
DD-Bo8	Train 1A Dryer	VOC	108.74	103.25
		VCM	37.86	49.10
		VAM	58.55	50.40
		Ethanol	12.33	3.75
		NH ₃	58.55	154.58
DD-B10	Train 1B Dryer Combustion Emissions	VOC	0.28	1.23
		NO _x	2.61	11.43
		CO	7.83	34.28
		PM	5.04	17.65
		PM ₁₀	0.76	2.65
		SO ₂	0.03	0.13
DD-B10	Train 1B Dryer	VOC	108.74	103.25
		VCM	37.86	49.10
		VAM	58.55	50.40
		Ethanol	12.33	3.75
		NH ₃	58.55	154.58
BD-Bo4	Train 2 Dryer Combustion Emissions	VOC	0.12	0.52
		NO _x	1.11	4.86
		CO	3.33	14.59
		PM	1.77	6.20
		PM ₁₀	0.02	0.06
		SO ₂	0.01	0.06

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
BD-Bo4	Train 2 Dryer	VOC	28.41	65.66
		VCM	11.08	19.98
		VAM	17.33	45.69
EG-01	Diesel Engine for Standby Power	VOC	1.70	0.04
		NO _x	20.96	0.55
		CO	4.52	0.12
		PM ₁₀	1.49	0.04
		SO ₂	1.39	0.04
EG-02	Diesel Engine for Standby Power	VOC	1.70	0.04
		NO _x	20.96	0.55
		CO	4.52	0.12
		PM ₁₀	1.49	0.04
		SO ₂	1.39	0.04
EG-03	Diesel Engine for Standby Fire Water Pump	VOC	1.35	0.04
		NO _x	16.59	0.43
		CO	3.57	0.09
		PM ₁₀	1.18	0.03
		SO ₂	1.10	0.03
EG-04	Diesel Engine for Standby Power	VOC	1.35	0.04
		NO _x	16.59	0.43
		CO	3.57	0.09
		PM ₁₀	1.18	0.03
		SO ₂	1.10	0.03

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
T-03	Aqua Ammonia Storage Tank	NH ₃	2.73	0.14
FUG-01	Process Area Piping Component Fugitives (5)	VOC	0.60	2.64
		VCM	0.57	2.48
		VAM	0.04	0.16
		NH ₃	0.03	0.13
TF-01	Tank Farm Piping Component Fugitives (5)	VOC	0.07	0.29
		VCM	0.05	0.23
		VAM	0.01	0.06
CT-01	Cooling Tower No. 1	VOC	1.25	5.48
		VCM	1.19	5.21
		VAM	0.06	0.27
		PM	4.14	18.15
		PM ₁₀	0.62	2.70
		PM _{2.5}	0.01	0.02
LPV-01	Low Pressure Vent - Trains 1 and 2 Reactor Opening Losses (6)	VOC	13.05	4.76
		VCM	13.05	4.76
LPV-03	Low Pressure Vent - Trains 1 and 2 Downstream Losses	VOC	2.69	3.66
		VCM	2.69	3.66
LPV-04	Low Pressure Vent - Train 1 and 2 Additive Building	VOC	5.95	3.00
		NH ₃	7.88	6.58
LPV-05	Low Pressure Vent - Trains 1 and 2 Slurry Treatment Area	VOC	2.70	1.00
		VCM	0.27	0.10

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CD-B02	CoPolymer Check Weigh Bin No. 1	PM ₁₀	0.03	0.12
		PM _{2.5}	0.01	0.01
CD-B18	CoPolymer Resin Bagger	PM ₁₀	0.50	1.68
		PM _{2.5}	0.02	0.05
CD-B27	CoPolymer Check Weigh Bin No. 2	PM ₁₀	0.03	0.12
		PM _{2.5}	0.01	0.01
CD-B28	CoPolymer Loading Baghouse	PM ₁₀	0.62	0.90
		PM _{2.5}	0.02	0.03
CD-B29	CoPolymer Nuisance Dust Pickup	PM ₁₀	0.04	0.12
		PM _{2.5}	0.01	0.01
BD-B06	Blending Resin Check Weigh Bin No. 1	PM ₁₀	0.02	0.07
		PM _{2.5}	0.01	0.01
BD-B07	Blending Resin Nuisance Dust Pick Up	PM ₁₀	0.54	1.81
		PM _{2.5}	0.02	0.06
BD-B10	Train 2 Hopper Vent	PM ₁₀	0.02	0.02
		PM _{2.5}	0.01	0.01
BD-B19	Blending Resin Bagger	PM ₁₀	0.62	0.90
		PM _{2.5}	0.02	0.03
BD-B28	Blending Resin Check Weigh Bin No. 2	PM ₁₀	0.02	0.07
		PM _{2.5}	0.01	0.01
BD-B50	Blending Resin Check Weigh Bin No. 3	PM ₁₀	0.03	0.12
		PM _{2.5}	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
BD-B51	Blending Resin Check Weigh Bin No. 4	PM ₁₀	0.03	0.12
		PM _{2.5}	0.01	0.01
BD-B52	Blending Resin Loading Baghouse	PM ₁₀	0.03	0.11
		PM _{2.5}	0.01	0.01
BD-B53	Blending Resin Separator	PM ₁₀	0.03	0.10
		PM _{2.5}	0.01	0.01
BD-B54	Blending Resin Separator	PM ₁₀	0.29	0.88
		PM _{2.5}	0.01	0.03
BD-B55	Blending Resin Separator	PM ₁₀	0.29	0.88
		PM _{2.5}	0.01	0.03
DD-B12	Grinder No. 1A	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B13	Grinder No. 1B	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B14	Grinder No. 1C	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B15	Grinder No. 2A	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B16	Grinder No. 2B	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B17	Grinder No. 2C	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
DD-B20	Train 1 Bagger Station No. 1	PM ₁₀	0.75	2.52
		PM _{2.5}	0.03	0.06
DD-B24	Bagger Station	PM ₁₀	0.75	2.52
		PM _{2.5}	0.03	0.06
DD-B31	Grinder No. 1D	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B32	Grinder No. 1E	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B33	Grinder No. 1F	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B34	Grinder No. 1G	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B35	Grinder No. 2D	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B36	Grinder No. 2E	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B37	Grinder No. 2F	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B38	Grinder No. 2G	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B39	Separator 1A	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
DD-B40	Separator 1B	PM ₁₀	0.34	1.14
		PM _{2.5}	0.02	0.04
DD-B41	Separator 2A	PM ₁₀	0.03	0.10
		PM _{2.5}	0.01	0.01
DD-B42	Separator 2B	PM ₁₀	0.03	0.10
		PM _{2.5}	0.01	0.01
DD-B43	Feed Hopper 1A	PM ₁₀	0.03	0.09
		PM _{2.5}	0.01	0.01
DD-B44	Feed Hopper 1B	PM ₁₀	0.03	0.09
		PM _{2.5}	0.01	0.01
DD-B45	Underground Product 1A	PM ₁₀	0.09	0.29
		PM _{2.5}	0.01	0.01
DD-B46	Underground Product 1B	PM ₁₀	0.09	0.29
		PM _{2.5}	0.01	0.01
DD-B47	Feed Hopper 2A	PM ₁₀	0.03	0.09
		PM _{2.5}	0.01	0.01
DD-B48	Feed Hopper 2B	PM ₁₀	0.03	0.09
		PM _{2.5}	0.01	0.01
DD-B49	Underground Product 2A	PM ₁₀	0.09	0.29
		PM _{2.5}	0.01	0.01
DD-B50	Underground Product 2B	PM ₁₀	0.09	0.29
		PM _{2.5}	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
WD-01	Resin Dryer	VOC	4.47	2.57
		PM ₁₀	0.16	0.56
		PM _{2.5}	0.01	0.02
		VCM	2.22	0.47
		VAM	2.25	2.11
S-01	CoPolymer Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-02	CoPolymer Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-03	CoPolymer Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-04	CoPolymer Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-05	CoPolymer Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-09	Blending Resin Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-10	Blending Resin Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-11	Blending Resin Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-12	Blending Resin Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
S-13	Blending Resin Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-14	Blending Resin Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-17	Dispersion Resin Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-18	Dispersion Resin Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-19	Dispersion Resin Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-20	Dispersion Resin Silo	PM ₁₀	0.12	0.42
		PM _{2.5}	0.01	0.02
S-25	Dispersion Resin Silo	PM ₁₀	0.11	0.36
		PM _{2.5}	0.01	0.02
S-26	Dispersion Resin Silo	PM ₁₀	0.11	0.36
		PM _{2.5}	0.01	0.02
T-Do1	Diesel Storage Tank	VOC	0.13	0.01
T-Do2	Diesel Storage Tank	VOC	0.13	0.01
T-Do3	Diesel Storage Tank	VOC	0.13	0.01
T-Do4	Diesel Storage Tank	VOC	0.13	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
WWT-2	Wastewater Treatment Plant	VOC	5.00	18.26
		VCM	0.44	1.60
		VAM	2.57	9.36
		NH ₃	2.30	8.40
Maintenance, Startup, and Shutdown (MSS)				
SPVC-MNT	Emissions to Atmosphere	VOC	20.54	2.31
		PM/PM ₁₀ /PM _{2.5}	0.01	0.01
		NH ₃	1.70	0.01

Emission Sources - Maximum Allowable Emission Rates

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
CO - carbon monoxide
PM - particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}
PM₁₀ - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.
PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
SO₂ - sulfur dioxide
HCl - hydrogen chloride
Cl₂ - chlorine
VCM - vinyl chloride monomer
VAM - vinyl acetate monomer
NH₃ - ammonia
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) Opening of reactors after every batch for cleaning prior to charging for the next batch.
- (7) Includes MSS emissions.

Date: November 30, 2012